

# **Battle Force Capabilities / Mission Capabilities Packages**

**For the Interoperability Workshop**



**N70  
Warfare  
Integration  
& Assessment**

**29 May 2001**

**CAPT John Yurchak**

The briefing and its attachments are UNCLASSIFIED

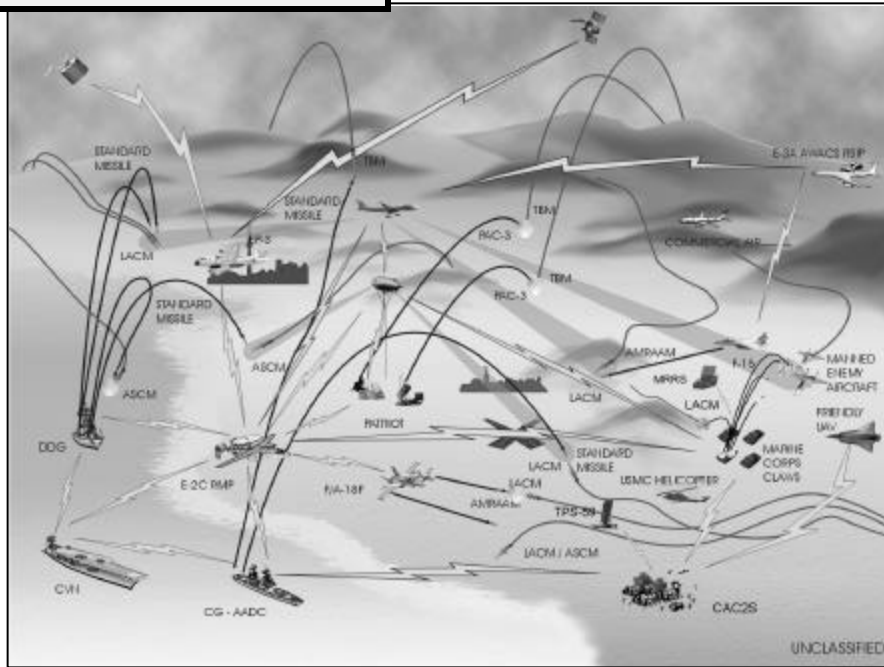
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The diagram illustrates a complex network of military assets and their operational relationships. At the top left, a satellite-like icon is connected to several ground-based assets. A large ship labeled "CHW" is positioned at the bottom left, with multiple lines radiating from it to other vessels and aircraft. In the center, a submarine labeled "ABCN" is shown. To its right, a helicopter labeled "USMC HELICOPTER" is depicted. Further right, a large aircraft carrier labeled "E-3A AWACS BWP" is visible. Various missiles are shown in flight paths, labeled "STANDARD MISSILE", "LACM", "ASCM", and "TPS-59". Other aircraft include "F/A-18F", "MAH RED ENEMY AIRCRAFT", and "CORONA/CALAB". Land-based assets like "CAC2S" and "MAHIE CORPS CLAWS" are also shown. The entire scene is set against a backdrop of stylized mountains and a cloudy sky.

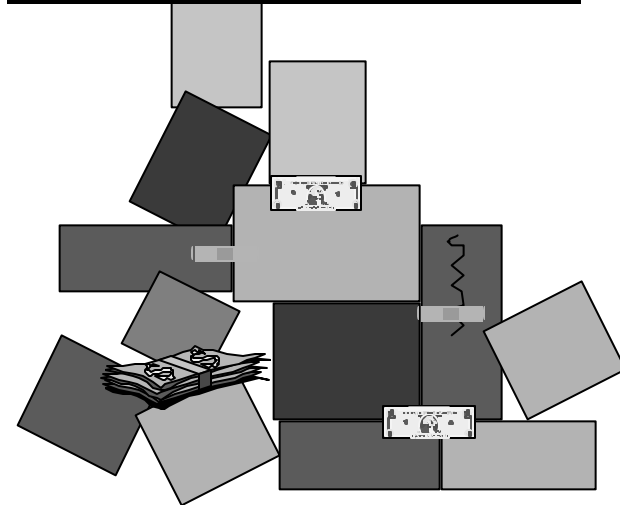
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# What's Wrong

## What We Want ...



## ... And How We're Trying To Get There Today



- Fundamental, systemic interoperability problems persist in POR systems
- Focus is still on systems and platforms vice capabilities
- Uncoordinated, non-synchronized decision processes
- Inconsistent information sources and decision products
- Many authorities / stakeholders not linked to key processes / decisions
- Confusion over “Who’s in charge” a recurring theme throughout
- Need for architectures repeatedly asserted

# Key Processes Affecting the End-State

## Key processes

Reqmnts Gen & Analysis

Capability Planning / Analysis

Opnl Concept Expl & Dev

R&D / Tech Innovation

Resources PP&B

Systems Engineering

Program Mgmnt

Configuration Control

Acquisition

## Related Activities

M&S / Lab / Live T&E  
and Experimentation

Analysis & Assessment

Planning

Tracking & Oversight

Tradeoffs  
(Risk, Capability, Engineering)

DoD, Navy/Joint/Allied Customers & Users, OPNAV, SYSCOMs, PEOs, PMs

- Multiple Stakeholders, Process Owners, Decision Authorities
- Different domains, agendas, objectives, incentives, metrics, frameworks

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# Summary Process Assessment

Reqmnts Gen & Analysis		○	●	●	●	○	○	×
Capability Planning / Analysis	○		●	×	●	○	×	○
Opnl Concept Expl & Dev	●	○		○	○	●	○	×
R&D / Tech Innovation	●	×	○		○	●	○	×
Resources PP&B	●	●	×	●		○	●	○
Systems Engineering	○	×	○	●	○		●	●
Program Mgmt	●	×	○	○	●	●		●
Configuration Control	×	○	×	×	×	●	●	

Many processes / links  
"broken" or ineffective

But ...

Lots of good work converging  
on some dominant issues

## Dominant Process Issues

- Inconsistent analytic frameworks and metrics
- Non-integrated requirements (platform vs battle force / FOS focus)
- Inconsistent, nonintegrated tradeoff processes and objectives (Risk, fiscal, capability, engineering, etc.) and feedback
- No unifying context

The status quo won't get us there

# Just How "Bad" Is It?

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- Not a "war-losing" condition, but ...
  - Operational confusion, delayed or errant decisions  
... when we need clarity and precision
  - Longer operational planning & execution timelines  
... when we need to shorten them
  - Smaller engagement envelopes  
... when we expected (paid for) much more
  - Increased cost-of-ownership and time-to-market  
... when we're trying to be more nimble and efficient
- It's taken a long time for us to get into the state we're in today ...  
... and it will take some time just to see improvement
- No one organization owns the key to a solution
- No single action or decision, from anyone, will get us out of this

# Who's "Doing" Architecture-Related Work Today?

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IWAR

CNA

JROC / JWCA

JTAMDO

ASD(C3I)

USJFCOM

SEA 05

ASN(RDA) CHENG

J38

SIAP SE

NIMA

J6

Organizational changes (alone) have not (yet) been effective.

NRO

N76

Much valuable architecture work underway, but ...

N75

- Mostly uncoordinated, non-integrated or incomplete
- Generally, platform / system focused (changing slowly)
- Inconsistent terms, fidelity, formats, tools, data models
- Non-compliant with OSD Architecture Framework
- Mostly ineffective (i.e., "powerless", irrelevant) documents
- Who integrates? Who validates? Who approves?
- What important decisions do they affect?

N6

N2

N78

**No coherent Navy, Joint, DoD "view"**

N77

N89

SPAWAR

NAVSEA

PEO

MCCDC

N7

N4

NAVSECGRU

NAVAIR

PMA / PMS

MCSC

# If We're Going to Effect Process Changes ...

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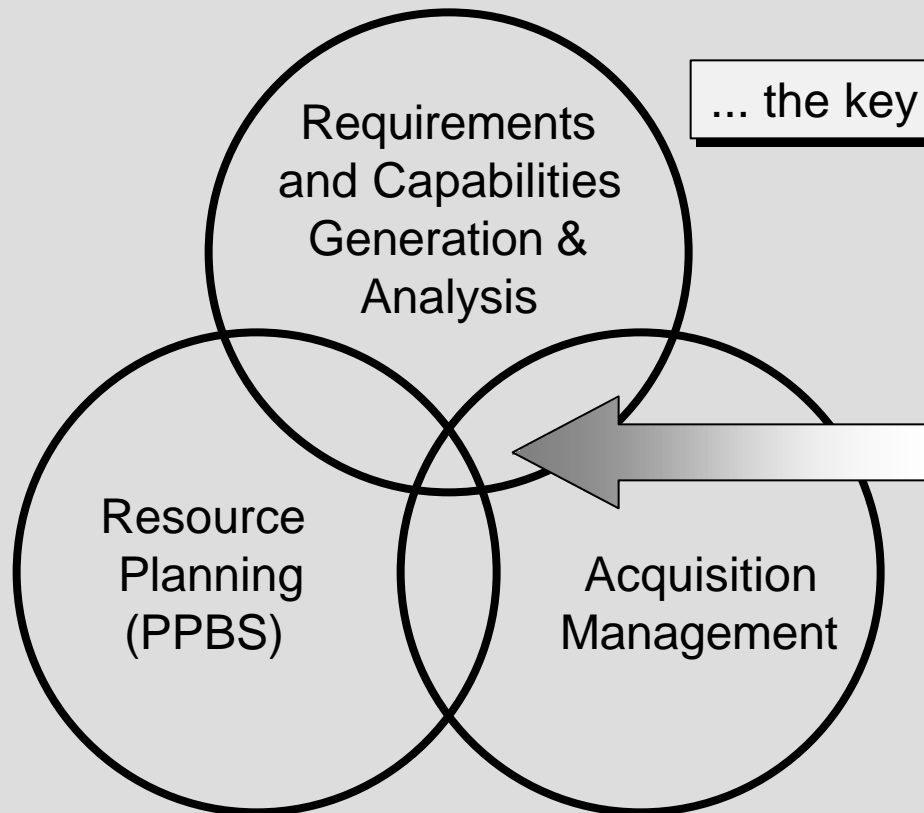
We must answer the following questions

- What are the relevant domains / processes?
- Who are (should be) ...
  - Stakeholders?
  - Process owners?
  - Decision makers?
- What relevant decisions to affect / effect, and when?
- How to support decisions?
  - What data, frameworks, methods, processes, tools, products?
- How to influence decisions?
  - Acquire decision authority?
  - Advise decision makers?

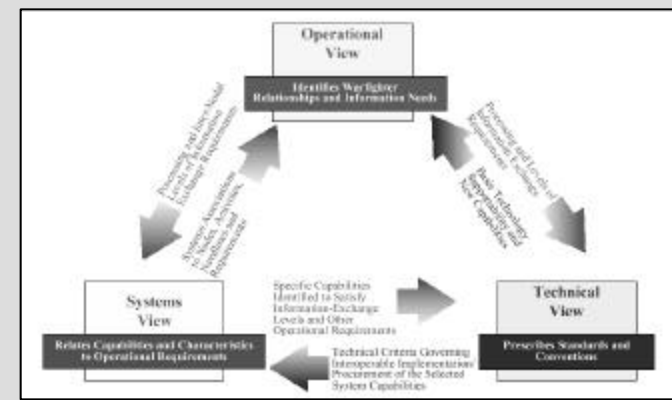


# What We're Proposing

How to Bring Together ...



... the key DoD Decision Support Systems ...



... Within An Integrated Architecture Framework

Note: This is not just C4ISR

Objective: Make milestones and other important program planning decisions depend on compliance with validated and approved integrated architectures

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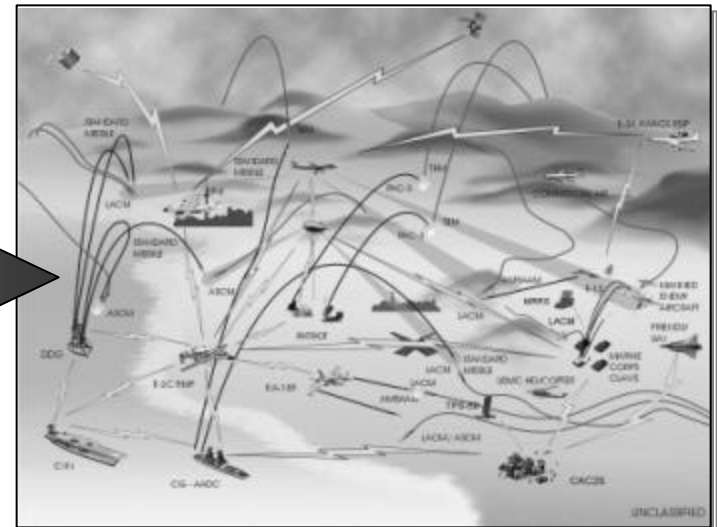
## Use Mission Capability Packages (MCPs) as the focus of integration

# What's a MCP?

- Introduced by the concept of Network Centric Warfare / Operations
- A Task-Organized Bundle of ...
  - CONOPS, processes and organizational structures
  - Networks, sensors, weapons and systems
  - The people, training and support services to sustain it

A MCP treats all of the above not as a collection of things and processes - - but as an integrated system

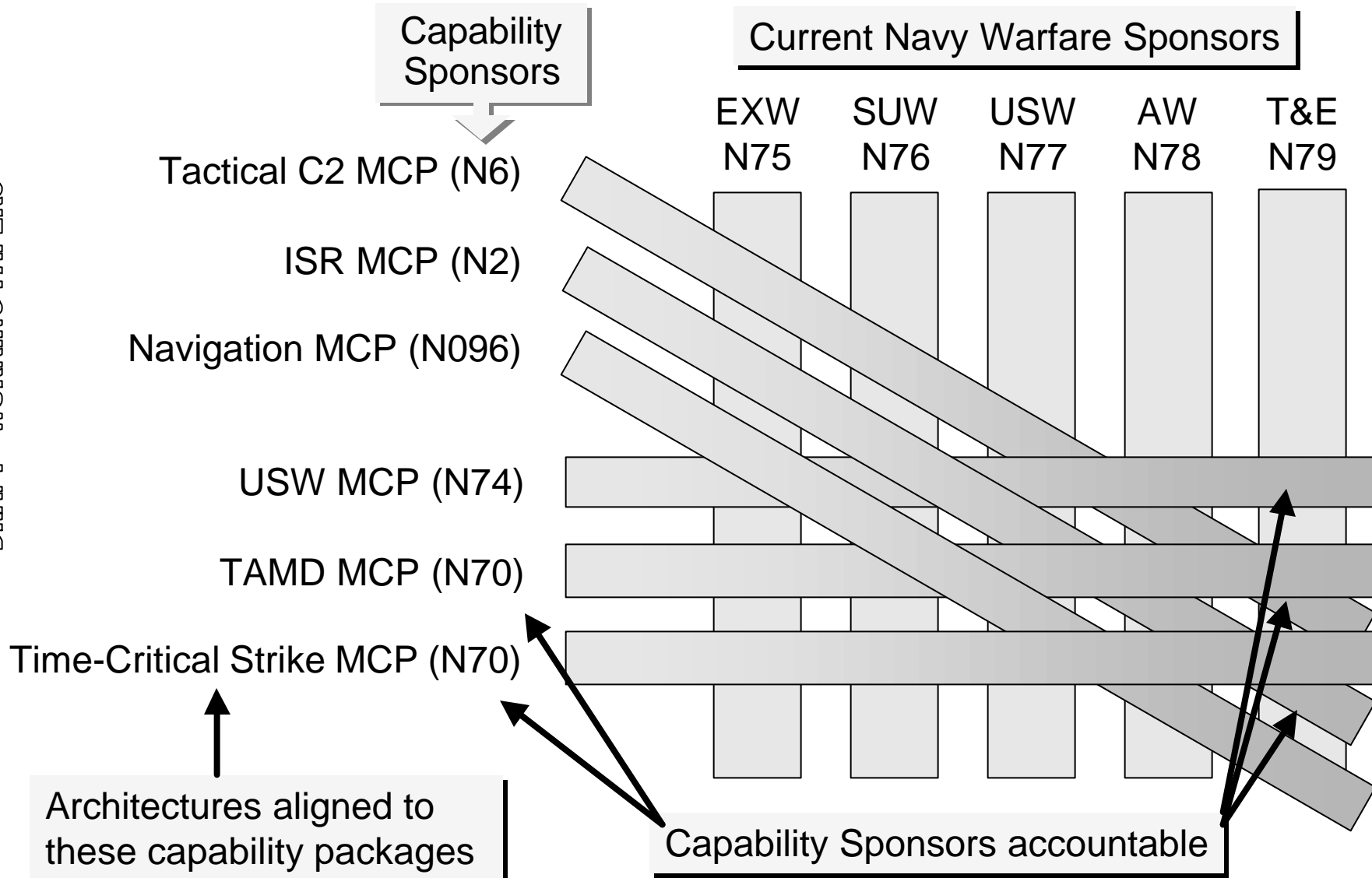
## Architectures should be based on (describe) MCPs



MCP ~ Joint Staff Joint Mission Area (JMA), DoD Portfolio

# Example Mission Capability Packages (MCPs) as "Slices" Through the Platform/System Domain

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# The Mechanisms For Change

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- The Principal Output =  
Battle Force Capabilities
- The Principal Mechanisms for Integration =  
Integrated Architectures
- The Principal Mechanisms for Achieving Alignment =  
Mission Capability Packages

# The Principal Navy Stakeholders

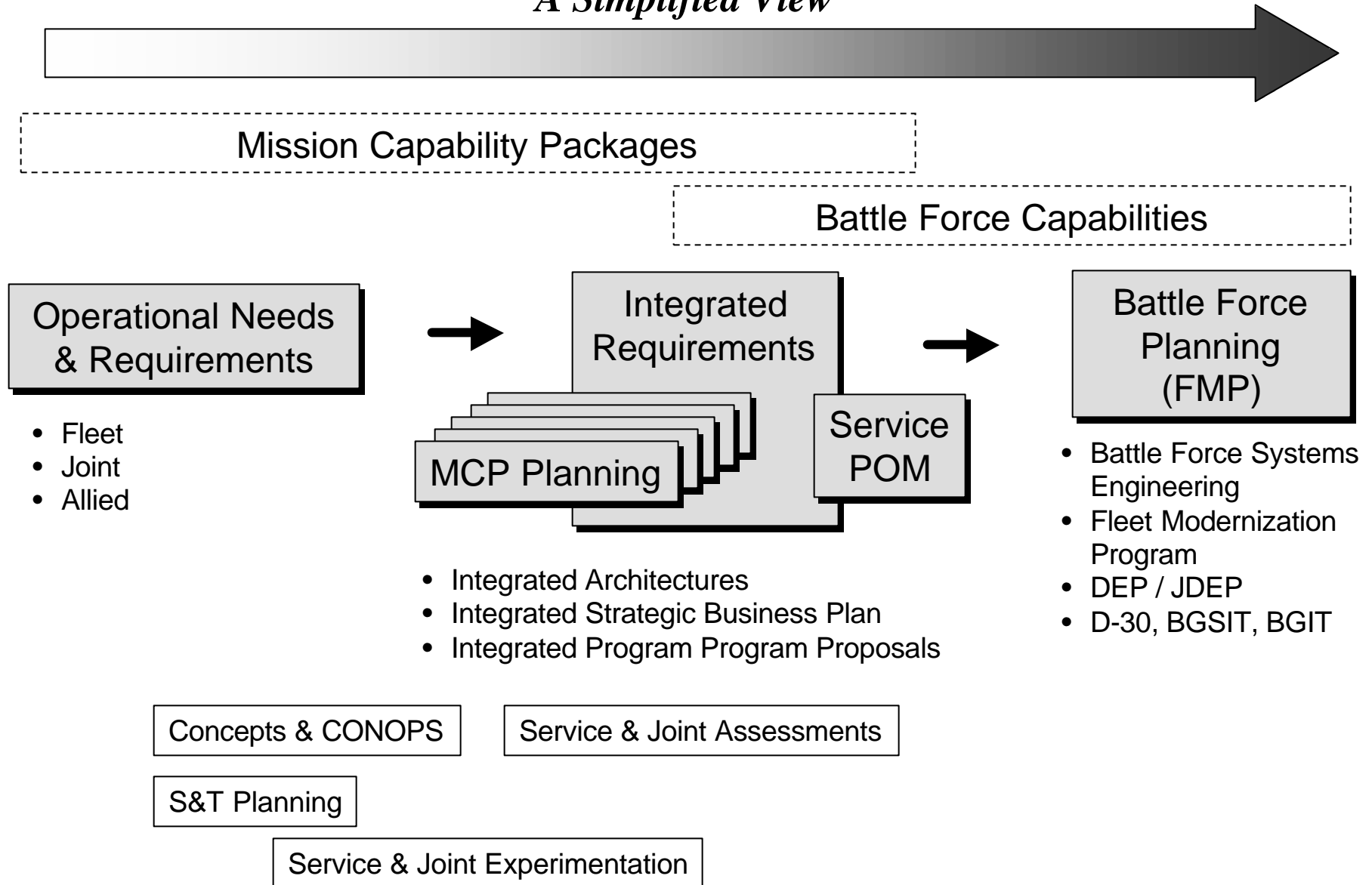
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- OPNAV (CNO, N8, N7, sponsors)
- Fleet
- ASN(RDA) Chief Engineer
- NWDC
- ONR
- PEOs and SYSCOMs

# Changes To The Status Quo

## *A Simplified View*

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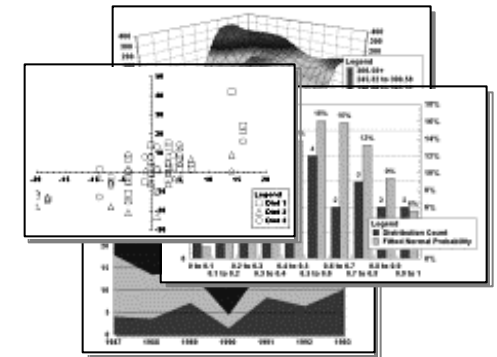
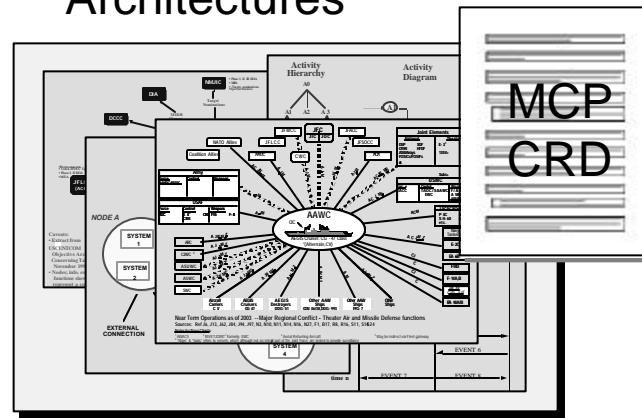
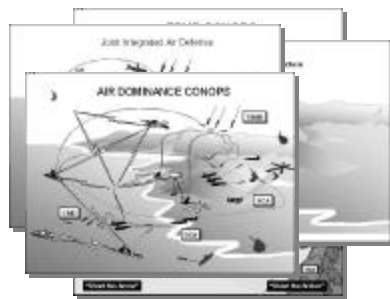
# Key Elements of the MCP Planning Process

## MCP Requirements Integration

Concepts & CONOPS

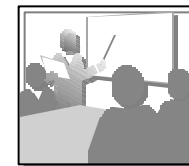
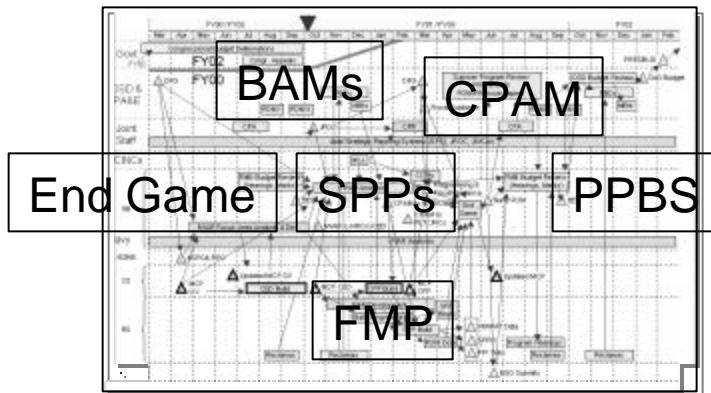
Integrated Architectures + CRDs

System-of Systems AOA



Integrated Strategic Business Plan (ISBP)

NROC / CEB



[ Detail / Explanation ]

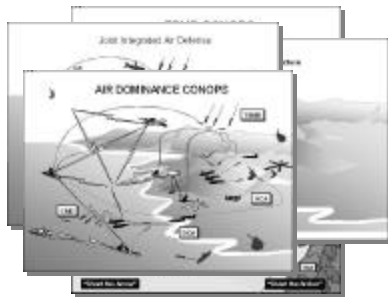
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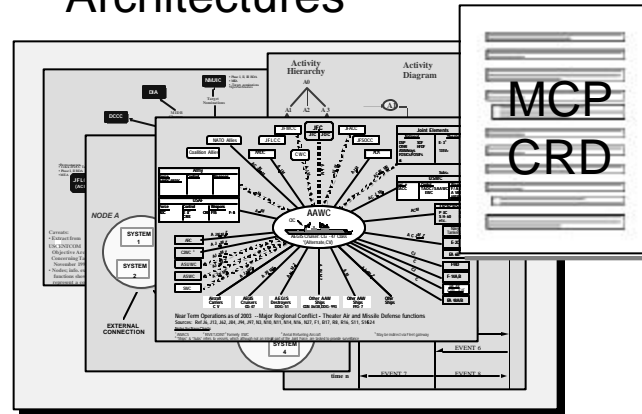
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## MCP Requirements Integration

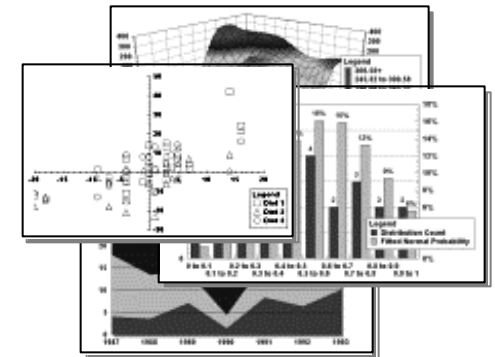
### Concepts & CONOPS



### Integrated Architectures + CRDs



### System-of Systems AOA



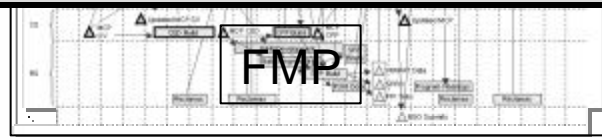
### Integrated Strategic Business Plan



What we are actually trying to do (accomplish)

- What are our operational objectives?
- What time frame (in the future)?
- What circumstances (situations, environments)?
- How do we propose to (operationally) do it?

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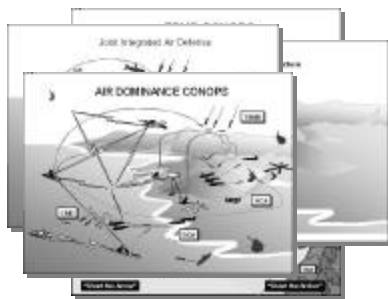




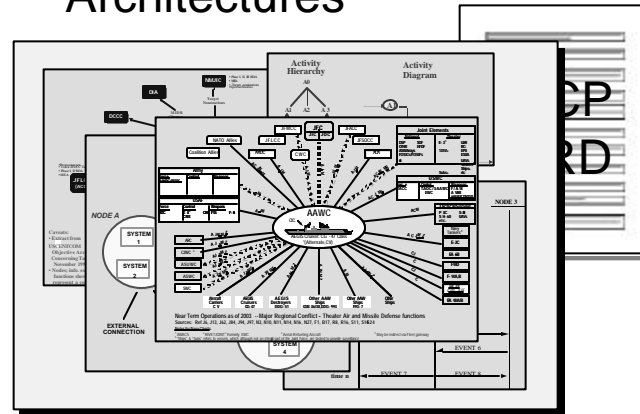
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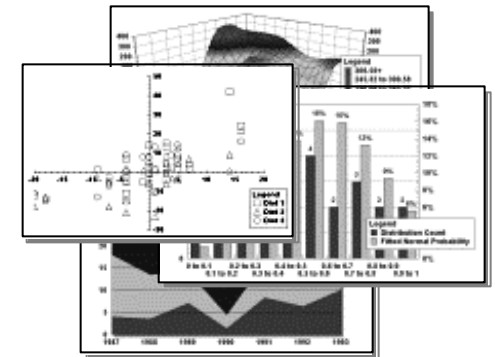
### Concepts & CONOPS



### Integrated Architectures + CRDs



### System-of Systems AOA



### Requirements analysis and the resulting Architecture

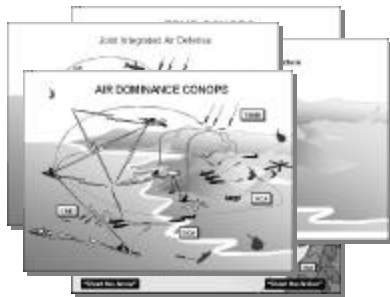
- Who are the actors (participants, nodes)?
- What specific tasks (activities) must the actors perform to accomplish our objectives?
- What is each task's relative importance (criticality) to the objectives?
- How are the actors organized?
- Who connects to whom (interfaces)? Under what circumstances?
- What key pieces of information must the actors share (pass, process)?

# Key Elements of the MCP Planning Process

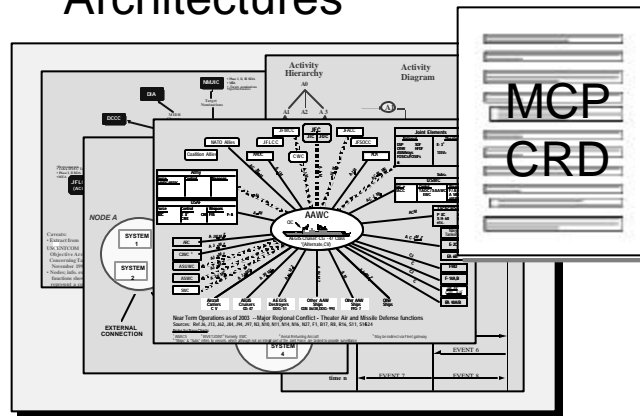
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## MCP Requirements Integration

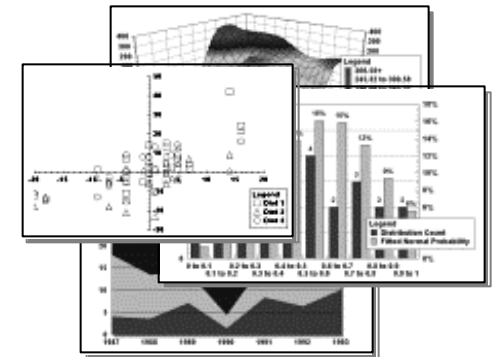
### Concepts & CONOPS



### Integrated Architectures + CRDs

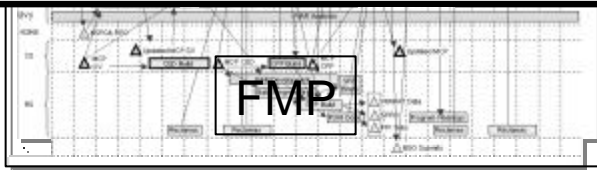


### System-of Systems AOA



Document the operational requirements for a system-of-systems capability

- The desired operational capability
- The threat
- Operational/requirements gaps, misalignments
- Operational and interoperability key performance parameters

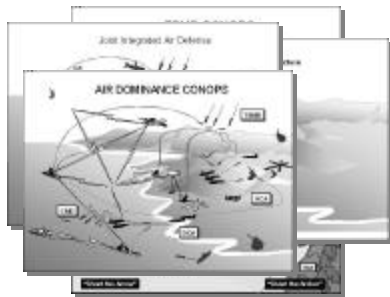


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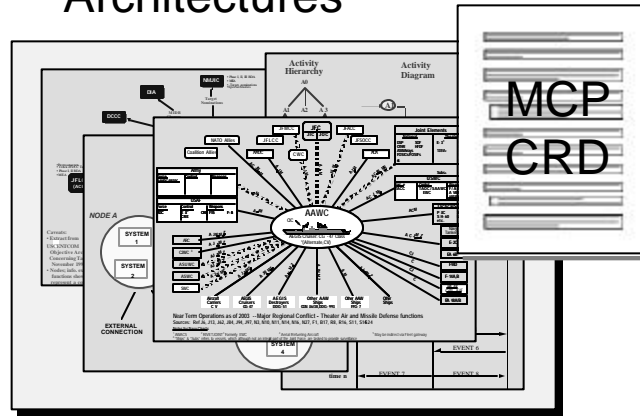
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## MCP Requirements Integration

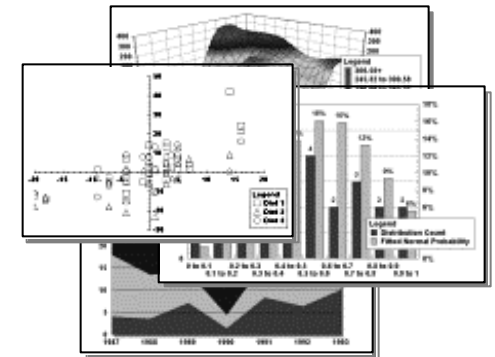
### Concepts & CONOPS



### Integrated Architectures + CRDs



### System-of Systems AOA



### Implementation analysis and trade-offs

- What are the operational performance-cost-schedule trades?
- What are the viable alternative paths to implementing the capability?
- What are the long-term effects on the shape of the architecture / capability?

### Refined systems requirements

- SRD, systems architecture(s), etc.

Strategic  
Plan



# Basic Approach We're Taking

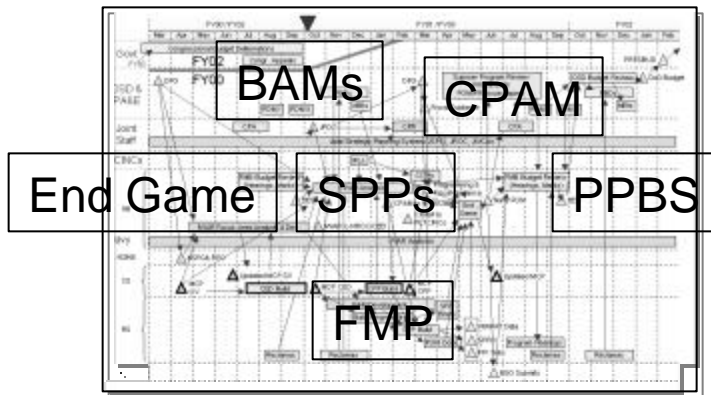
## MCP Requirements Integration

Concept

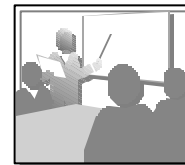
- The Strategic Business Plan for implementing the capability
- What specific implementation alternatives should we consider?
  - What specific capability objectives? What time-frame?
  - What contributes to each objective (platforms, programs, systems, technologies, training, support, etc.)?
  - How to we time-phase the implementation?
  - What specific changes to the POR?
  - How do we propose to resource each change?
  - What are the priorities?

s AOA's

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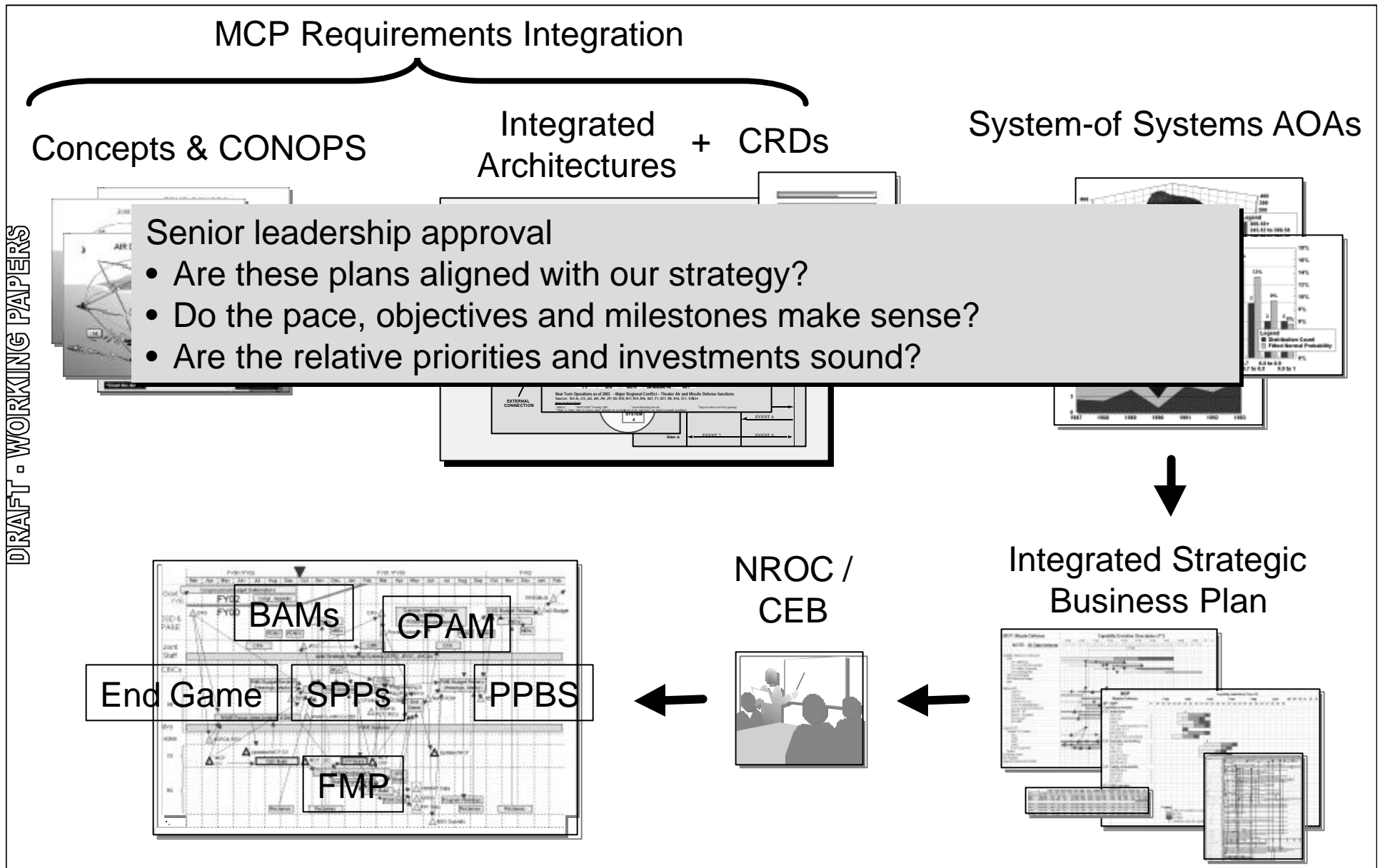
NROC /  
CEB



Integrated Strategic  
Business Plan



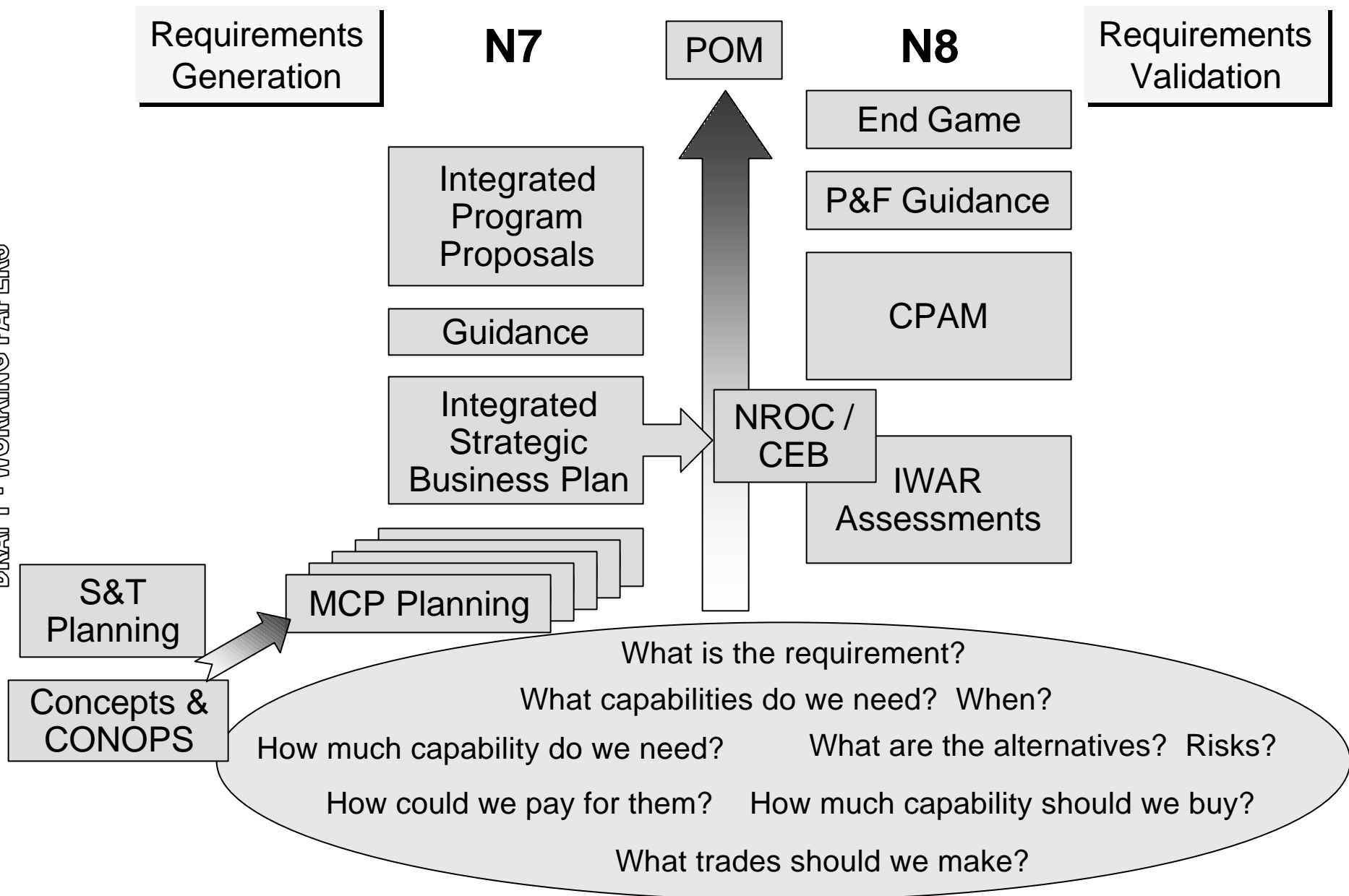
# Basic Approach We're Taking



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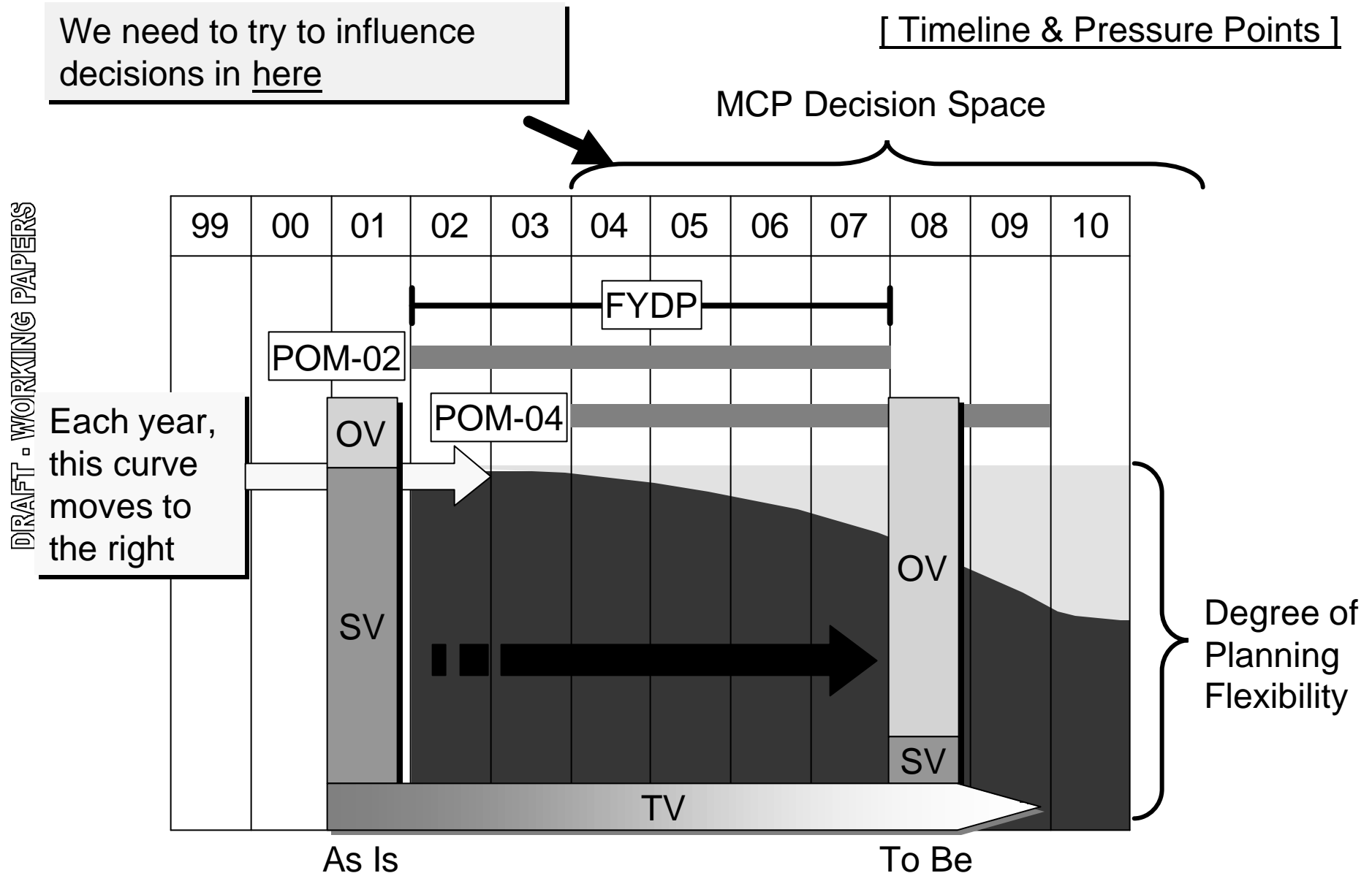
# Changes to The Status Quo (OPNAV)

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# Architecture/CED Influence Time Frame

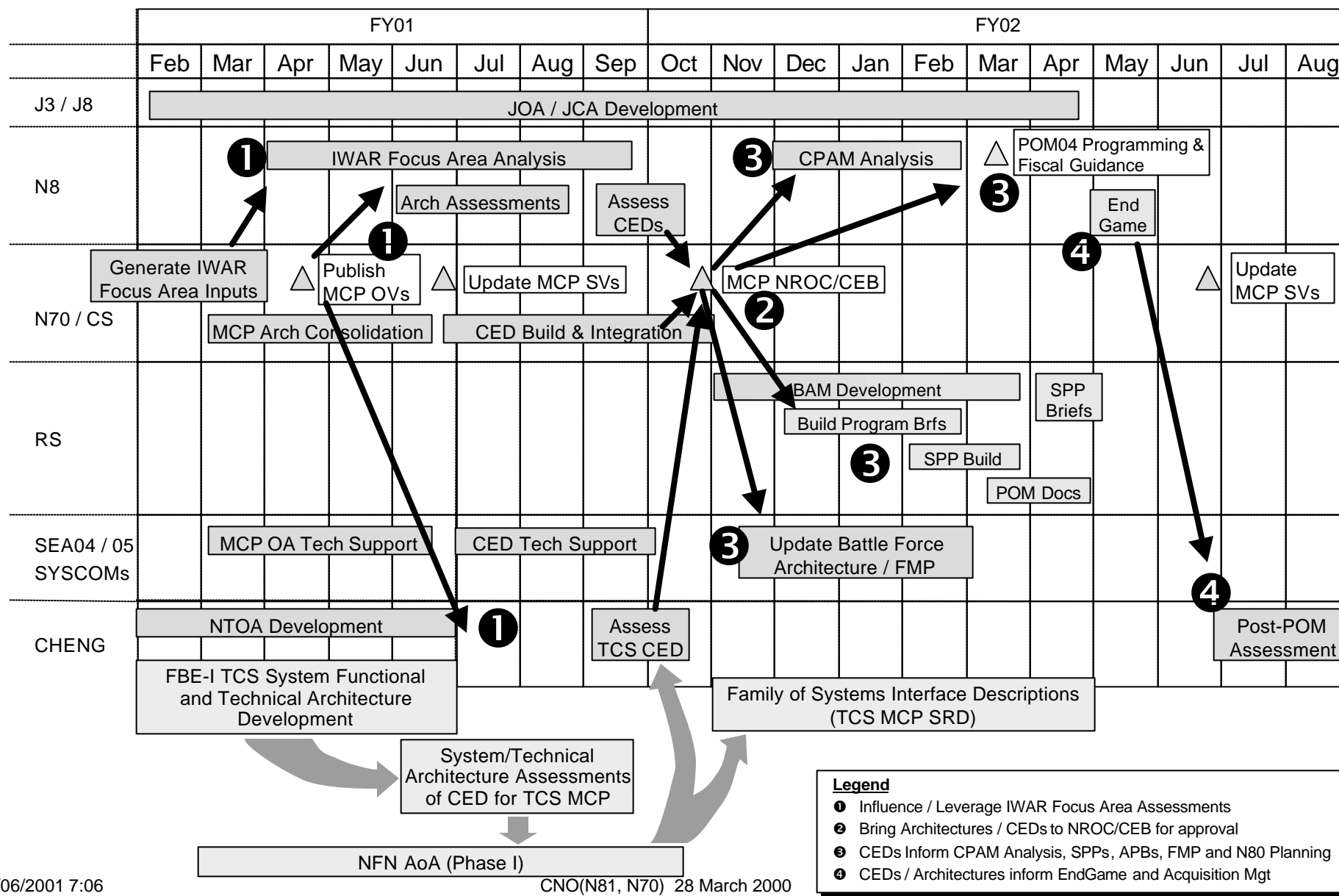
(Assuming the current planning target is POM-04)



# Timeline and Pressure Points

*(TCS example, assuming the current planning target is POM-04)*

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# What Budget Are You Working On Today?

## *The Lure of the "Quick Kill"*

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All these processes are happening concurrently

Execution: FY01

In Congress: POM-02

Service Programming: PR-03



Service Planning & Assessment: POM-04

What interoperability planners should be trying to effect / affect today

Changes or directives applied "above" POM-04

(in the absence of some overarching plan or context)

risk breaking or invalidating

- Previous coordination or integration
- Previously set priorities
- Program or resource synchronization or alignment

# Questions?